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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,420	02/19/2002	Hiroyuki Nakagawa	1021.41200X00	9292

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EXAMINER	
BERNATZ, KEVIN M	

ART UNIT	PAPER NUMBER
1773	7

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,420	NAKAGAWA ET AL.	
	Examiner	Art Unit	
	Kevin M Bernatz	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Amendments to claims 2, 3, 6 and 9 - 15, filed on July 23, 2003, have been entered in the above-identified application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1 – 11 and 13 - 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. ('917 A1) in view of Chen et al. ('071), as evidenced by applicants' admissions.

Regarding claims 1 – 8, the above rejection is maintained for the reasons of record as set forth in Paragraph No. 4 of the Office Action mailed on April 24, 2003 (Paper No. 4).

Regarding claims 6 and 10, Sakai et al. disclose alloys consisting of Co and Cr and alloys meeting applicants' claimed composition limitations (*Paragraph 0044*).

Regarding claims 9 and 11, the limitation(s) "is the main recording layer" and "is a thermal-stabilizing layer"" are (an) intended use limitation(s) and are not further limiting in so far as the structure of the product is concerned. Note that "in apparatus, article, and composition claims, intended use must result in a ***structural differenc*** between the claimed invention and the prior art in order to patentably distinguish the

claimed invention from the prior art. ***If the prior art structure is capable of performing the intended use, then it meets the claim***. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art." [emphasis added] *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963). See MPEP § 2111.02. In the instant case, the prior art structure is deemed capable of performing the intended use since the material used to form the layers are substantially identical to applicants' claimed invention.

Regarding claims 13 - 15, Sakai et al. disclose a protective and lubricant layer meeting applicants' claimed structural and material limitations (*Figure 1 and Paragraph 0049*). The limitation "suppresses reaction of the carbon" is a functional limitation(s). As defined in the MPEP, "[a] functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. *In re Swinehart*, 439 F.2d 210, 169 USPQ 226 (CCPA 1971)" – MPEP § 2173.05(g). However, the examiner notes that "where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an ***inherent characteristic of the prior art***, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristics relied on" (emphasis added) - MPEP § 2183.

In the instant case, the claimed limitation(s) "suppresses reaction of the carbon" is a functional limitation(s) and is deemed to necessarily result from the prior art since the prior art is substantially identical in composition and/or structure. The examiner's sound basis for this assertion is applicants' admissions that as long as the second layer is greater than 0.5 nm, the reaction with carbon is suppressed (page 5, lines 15 – 20). The Examiner notes that Sasaki et al. teach that the second layers all possess a thickness well in excess of 0.5 nm (*Paragraph 0052*).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. in view of Chen et al. and evidenced by applicants' admissions as applied above, and further in view of Shimizu et al. (U.S. Patent App. No. 2002/0012816 A1) and Honda et al. (U.S. Patent No. 5,851,643).

Sakai et al. in view of Chen et al. and evidenced by applicants' admissions is relied upon as described above.

None of the above disclose the second layer being provided on the surface of the first layer (i.e. being directly deposited on the first layer).

However, the Examiner deems that multilayered magnetic film structures possessing a non-magnetic intermediate layer and multilayered magnetic film structures without a non-magnetic intermediate layer are known equivalents in forming multilayered magnetic film structures for recording media, as evidenced by Honda et al. (*col. 5, line 25 bridging col. 6, line 11 and col. 6, lines 35 – 38*) and Shimizu et al. (*Paragraphs 0024 – 0027 and 0038 – 0045*).

Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, a multilayered magnetic structure with and without non-magnetic intermediate layers are equivalents in the field of multilayered magnetic structures. *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

Response to Arguments

5. The rejection of claims 1 - 8 under 35 U.S.C § 103(a) – Shimizu et al. in view of Sakai et al.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

The above noted rejection has been withdrawn since Shimizu et al. ('651 A1) is no longer applicable as prior art under 35 U.S.C. 103(a) since applicants have perfected their claim for priority and are entitled to the filing date of JP '306.

6. The rejection of claims 1 - 8 under 35 U.S.C § 103(a) – Sakai et al. in view of Chen et al.

Applicant(s) argue(s) that Sakai et al. neither teaches nor suggests a three layered structure as claimed in claim 1 and that Chen et al. is not analogous art since Chen et al. is directed to a recording medium having magnetically isotropic and

anisotropic layers, not a perpendicular recording medium. The examiner respectfully disagrees.

First, applicants are reminded that the test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. *In re Rosselet*, 347 F.2d 847, 146 USPQ 183 (CCPA 1965); *In re Hedges*, 783 F.2d 1038; *Ex parte Martin* 215 USPQ 543, 544 (PO BdPatApp 1981). In the instant case, Sakai et al. may not explicitly disclose a three layered structure meeting applicants' claimed limitations, but the combined teachings of Sakai et al. in view of Chen et al. would necessarily result in a structure meeting applicants' claimed limitations for the reasons of record. The Examiner maintains that Chen et al. is analogous art since the relied upon teaching in Chen et al. is merely that one can form multiple magnetic layers sequentially deposited on one another inorder to increase the areal recording density, something which is desired in all types of recording media, longitudinal and perpendicular included. The Examiner notes that Honda et al. ('643) provides clear support for the Examiner's position that multilayered perpendicular media are known in the art.

Finally, applicants argue that even assuming that Chen et al. was properly combinable with Sakai et all, the combination would not have resulted in the claimed invention since Chen et al. teach a structure comprising having magnetically isotropic and anisotropic layers stacked together. The Examiner respectfully disagrees.

Applicant(s) are reminded that "the test for obviousness is not whether features of the secondary reference may be bodily incorporated into the primary reference's structure, nor whether the claimed invention is expressly suggested in any one or all of the references, rather the test is what the combined teachings would have suggested to those of ordinary skill in the art." *Ex parte Martin* 215 USPQ 543, 544 (PO BdPatApp 1981). In the instant case, Sakai et al. clearly provides the structural basis for a perpendicular medium possessing CoCr and amorphous rare-earth transition-metal alloy magnetic layers. Chen et al. merely provides evidence that making multilayered media wherein the magnetic layers are sequentially deposited on top of each other is known in the art to produce media possessing increased Areal recording density.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Applicants' amendment resulted in embodiments not previously considered (i.e. claims 9 - 15) which necessitated the new grounds of rejection, and hence the finality of this action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (703) 308-1737. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

KMB
October 9, 2003

Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700